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U.S. EPA Pacific Southwest/Region 9

Clean Air Permitting Programs

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AIR PERMITS

How Does the Public Benefit from Air Permits?

The public benefits from *preconstruction permitting* because it requires pollution sources to evaluate their controls, potential air pollution mitigation and opportunities for public review and comment. Moreover, federal law prohibits the construction or modification of a major stationary source unless it can demonstrate that the project will not cause or contribute to a violation of the National Ambient Air Quality Standards (NAAQS).

The federal *operating permitting* program requires sources to assure compliance with all applicable requirements. This program also provides the public with an opportunity for review of the proposed operating permit, the ability to petition EPA for changes to the permit and the capability for tracking the facility's compliance by reviewing the reports and certifications that each permittee must send to the permitting agency.

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What is an Air Permit?

An air permit is a legally binding document that includes enforceable conditions which apply to the owner or operator of the source of air pollutant emissions. There are two categories of air permits: preconstruction permits and operating permits. The purpose of an air permit is to protect and manage air quality by ensuring each stationary source complies with the federal Clean Air Act (CAA), associated federal regulations and state and local air requirements. The EPA Region 9 Air Permits Office is primarily responsible for reviewing preconstruction and operating permits for stationary sources of air pollution in Arizona, California, Hawaii, Nevada and Guam. Although most air permits are issued by state and local permitting authorities, EPA issues preconstruction permits and operating permits to sources in some areas where the federal government is the permitting authority.

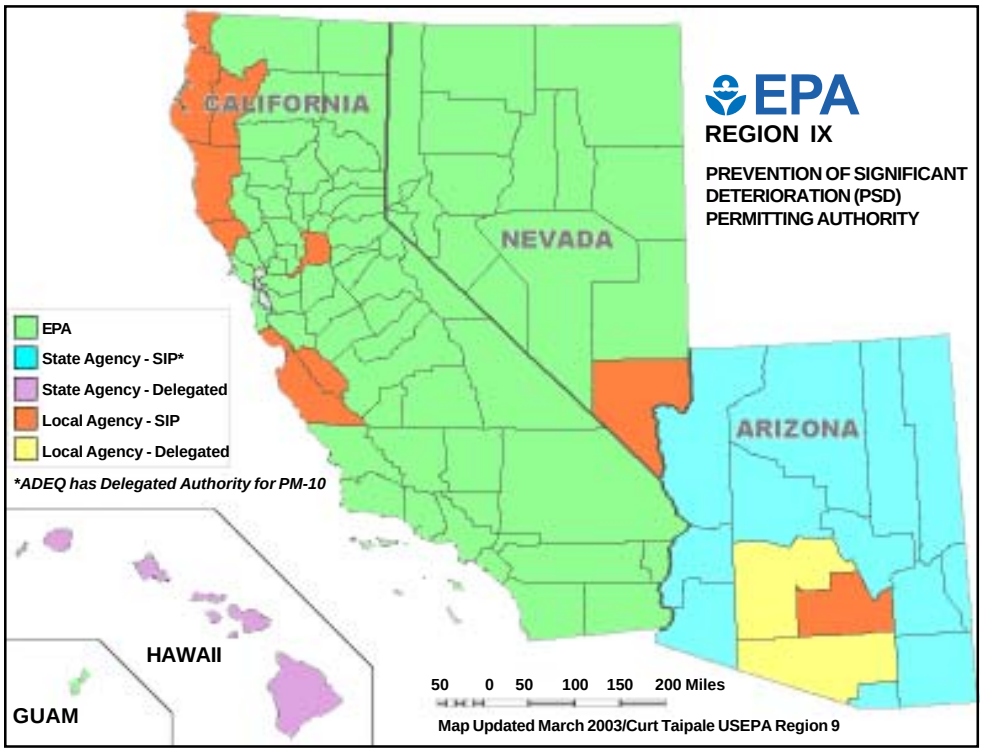
(1) **Preconstruction Permits**: Major stationary sources of air pollution and major modifications to major stationary sources are required by the CAA to obtain a preconstruction permit before commencing construction. The process is called **new source review (NSR)** and is required whether the major source or modification is planned for an area where air quality is acceptable (in attainment and unclassifiable areas) or for an area where the national ambient air quality standards (NAAQS) are exceeded (nonattainment areas). Permits for sources in attainment areas are referred to as **prevention of significant air quality deterioration (PSD)** permits, while permits for sources located in nonattainment areas are referred to as **nonattainment area (NAA)** permits. The entire program, including both PSD and NAA permit reviews, is referred to as the NSR program.

Criteria air pollutants include nitrogen oxides (NOx), carbon monoxide (CO), volatile organic compounds (VOC), particulate matter under 10 microns (PM_{10}), sulfur dioxide (SO_2) and lead (Pb).

The PSD and NAA requirements are specific to a particular criteria air pollutant. For example, a facility may emit many air pollutants. However, depending on the magnitude of the emissions of each pollutant, only one or a few may be subject to the PSD or NAA permit requirements. Also, a source may have to obtain both PSD and NAA permits if the source is in an area where one or more of the pollutants is designated nonattainment.

(2) **Operating permits**: All major stationary sources must apply for a **federal operating permit** (also known as **Title V** or **Part 70 permit**). The goal of the federal operating permit is to improve a source's compliance by including all federal requirements that apply to a source into one comprehensive document. The federal requirements could include any preconstruction permit conditions, performance standards, implementation plan requirements, acid rain program requirements or any other CAA requirements.

Additional information about the Title V operating permit program can be found at: **http://www.epa.gov/oar/oaqps/permits/partic/proof.html**



ENDANGERED SPECIES

Endangered Species Act and Clean Air Permitting

We are all probably aware of the Endangered Species Act (ESA). It was designed to provide protection to certain endangered or threatened species. But how does the Endangered Species Act relate to air permits?

Air permits are issued either by a local air permitting agency (either state or local air district) or by the federal EPA. Whether the permitting authority is local or federal differs from state to state as well as areas within each state. Furthermore, it can depend on the type of permit being issued.

If the permit is being issued by the EPA, then federal requirements, including those of the ESA, apply. Specifically, due to ESA requirements, a biological assessment must be performed and approved before a federal permit will be issued. (For state-issued permits, the state may have its own endangered species regulations and requirements with which the source must comply.) The U.S. Fish & Wildlife Service (FWS) is the agency responsible for reviewing biological assessments and determining whether ESA requirements are met. EPA works in partnership with FWS and the applicant to have all ESA issues addressed. EPA is involved by providing guidance as well as an independent review of the biological assessments. The following examples illustrate how ESA issues were addressed in recent PSD permits in Region 9:

I. *Gila Bend Power Generation Project:* EPA consulted with the FWS regarding the proposed project's effect on the endan-gered cactus ferruginous pygmy-owl. The applicant agreed to a plan proposed by FWS to mitigate the effects the project plan in place. FWS concurred with EPA's determination of no likely adverse effect on any listed species in the proposed project area.

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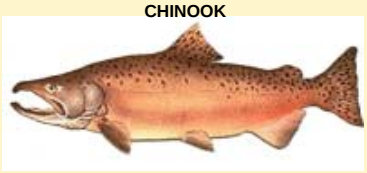

II. *Potrero Power Plant Unit 7 Project:* EPA requested initiation of a formal consultation for this ongoing project because there is a suspected adverse impact on Central California Coast steelhead, Sacramento River winter-run chinook salmon, Central Valley spring-run chinook salmon and Central Valley steelhead species. In addition, the project site, the southern bay portion of San Francisco Bay, is a designated critical habitat. EPA's concerns included potential impacts on juvenile salmonids from the heated discharge plume, entrainment at the pump intakes of prey species that form the basis of the food chains in San Francisco Bay and the cumulative effects of the project with other activities in the project area. EPA is working closely with the National Marine Fisheries Service and the applicant to resolve these concerns.

III. *Colusa Power Plant:* EPA requested the initiation of a formal consultation for the Colusa Power project to address potential adverse impacts to the giant garter snake, vernal pool fairy shrimp and vernal pool tadpole shrimp. The formal consultation process is ongoing.

IV. *Elk Hills Power Plant:* Since this power plant project was subject to an action by the U.S. Bureau of Land Management (BLM), both EPA and BLM jointly requested formal consultation with the Fish and Wildlife Service. As part of the formal consultation process, the FWS published a Biological Opinion, which concluded that the project was not likely to jeopardize the continued existence of the following listed species that were studied: San Joaquin kit fox, giant kangaroo rat, Tipton kangaroo rat, blunt-nosed leopard lizard, Hoover's eriastrum and California condor. In addition, the Biological Opinion required reasonable and prudent measures to be implemented to minimize the impact of the Elk Hills Power project on these species.

PERMIT PROGRAMS THROUGHOUT REGION 9

Title V of the 1990 Clean Air Act amendments requires that all states and territories adopt and submit to EPA a Title V operating permit pro-gram for EPA review and approval. As a result, permit programs vary somewhat from state to state and, in some cases, even from area to area within a state.

In the case of preconstruction permitting, if states or local agencies would like to administer the NSR program themselves, they must first submit PSD and NAA rules, if applicable, to EPA for review and approval as part of the state implementation plan (SIP). The NSR SIP can include local district rules more stringent than the federal PSD/NAA requirements. Once the SIP is approved by EPA, the state or local agency has a "SIP approved PSD program."

For either the NSR program or the Title V operating permit program, if the state or local agency does not submit a plan or program, EPA assumes the responsibility of administering the program for that agency. Another option is that EPA can "delegate" the program to the state or local agency. This means that the agency is responsible for writing and issuing permits, but EPA must review each permit before it is finalized.

Below are descriptions of various permit programs in Region 9.

PACIFIC ISLANDS

Pacific Island Programs (Guam, Commonwealth of the Northern Mariana Islands and American Samoa)

Instead of submitting a Title V program, in 1994 the governors of Guam, the Commonwealth of the Northern Mariana Islands (CNMI) and American Samoa submitted petitions to EPA requesting an exemption from the Title V program, but committing to achieve the goals of Title V by developing an alternate operating permit program. The Clean Air Act does allow for this petition process for these territories.

In1996, EPA granted a conditional waiver to Guam, CNMI and American Samoa exempting them from the requirement to adopt a Title V operating permit program on the condition that the territories adopt and implement a local alternate program by 1999.

The alternate operating permit program, as approved by EPA, contains all of the core requirements of a usual Title V program, including monitoring, recordkeeping and reporting requirements. However, it generally allows more time for sources to obtain permits.

Guam, CNMI and American Samoa all submitted their alternate permit programs to EPA before the 1999 deadline. Currently, EPA is preparing to grant interim approval of Guam's alternate program. However, because of significant program changes still needed before approval, CNMI and American Samoa will not be able to meet their permit issuance deadlines and may become subject once again to the usual requirements of the Title V program.

HAWAII

Air Permitting in Hawaii

The air permitting program in Hawaii is administered by the Hawaii Department of Health (HDOH). Hawaii's air permitting program is a combined New Source Review/Operating Permits Program. In Hawaii, each *new* major source must obtain a permit that satisfies both the requirements for preconstruction permits (under the New Source Review program) and operating permits (subject to Title V). Each *existing* major source must obtain an operating (Title V) permit, as usual. The air permitting program in Hawaii is unusual in its PSD permitting process in that EPA concurrence is required.

Preconstruction Permits

Under a 1989 agreement, each PSD permit issued by HDOH must have EPA concurrence on certain analyses before the permit can become final. As a result, every final PSD permit issued by the HDOH must have not only the signature of the Director of the HDOH, but also the signature of the

Director of EPA Region 9's Air Division.

Originally, a 1983 agreement required EPA concurrence on only the first five PSD permits issued by Hawaii. In the late '80s, however, a dispute arose over a final PSD permit that HDOH issued to a municipal waste combustor, over EPA's objections. These objections centered on lack of air pollution controls. As a result of this dispute, EPA amended the agreement in 1989 to require EPA concurrence on all future Hawaii PSD permits.

Operating Permits

Deficiencies in Hawaii's Title V permitting program came to light as a result of the court decision in *Western States Petroleum Association v. Environmental Protection Agency* (9th Cir. 1996). Because of the significance of the deficiency in the state program, EPA was required by law to issue a notice of deficiency (NOD) directing the state to correct the identified program deficiencies within 18 months. Since then Hawaii, working closely with EPA, has drafted regulations that address the deficiencies identified in the NOD and is currently in the process of adopting the proposed rule revisions. EPA and HDOH are confident that the state will have regulations in place correcting the identified program deficiencies well before the deadline imposed by the NOD.

ARIZONA

Arizona Permitting Programs

The permitting programs in Arizona are similar to Hawaii's in that they have an integrated Title V/New Source Review (NSR) program. In other words, a *new* major source must obtain a permit which satisfies both the requirements of NSR and Title V in one document. Existing sources are required to obtain a Title V operating permit, as usual.

The state of Arizona has four air permitting authorities which EPA oversees: Maricopa County Environmental Services Department, Pima County Department of Environmental Quality, the Pinal County Air Quality Control District, and the Arizona Department of Environmental Quality, which issues permits in all other counties. These permitting authorities are responsible for issuing both preconstruction permits, under the NSR program, as well as federal operating permits under the Title V program.

EPA reviews permits for major sources proposed by these four permitting authorities and provides their offices with guidance concerning permitting issues. In order to facilitate a cooperative working relationship with these agencies, EPA also holds quarterly meetings with all of the permitting managers from each of the permitting authorities in order to address any issues concerning their program implementation.

Recent Work Achievements in Arizona

Earlier this year, the Arizona Department of Environmental Quality (ADEQ) faced a deadline imposed by the Arizona state legislature in which the agency had to issue initial Title V permits to various sources by June 30, 2002. In order to meet this deadline, EPA was asked by ADEQ to expedite review of six of its most controversial Title V permits. These permits included the Phelps Dodge Sierrita Copper Mine, Phelps Dodge Miami Copper Smelter, Chemical Lime Douglas, Chemical Lime Nelson, Arizona Portland Cement and Phoenix Cement. Title V permits are subject to a 30-day public comment period followed by a 45-day EPA review period. Typically the EPA review period begins once the permitting authority concludes the public comment period and responds to public comments. This enables EPA to review a proposed permit which incorporates any changes that may have resulted from public comments. To help meet the deadline, EPA agreed with ADEQ to initiate the public comment period at the same time as the EPA 45-day review period for five of these permits.

Over the course of the four months leading up to the state's deadline, EPA worked very closely with ADEQ to address any concerns regarding the proposed permits. EPA's efforts yielded substantial improvements to all of the permits reviewed. EPA was able to ensure that the final permits contained all the appropriate applicable requirements as well as provisions that adequately assured compliance with these requirements. Specifically, the review resulted in ADEQ withdrawing one of the proposed permits because it found that the source should have undergone review under the preconstruction permit program. EPA was also able substantially to improve the periodic monitoring requirements in all the permits. At the same time, EPA's expedited review enabled ADEQ to meet its June 30, 2002 deadline to issue these initial Title V permits.

NEVADA

Nevada Permitting Programs

The EPA Air Permits Office works with three permitting authorities in Nevada: Nevada Division of Environmental Protection (NDEP), Clark County Department of Air Quality Management (DAQM) and Washoe County Health Department, Air Quality Management Division. Like the permitting authorities in Hawaii and Arizona, NDEP has a combined New Source Review and Operating Permits Program. Clark DAQM and Washoe County implement separate NSR and Title V Operating Permit programs.

All three Nevada agencies have authority to issue PSD permits to major sources in attainment areas. Clark County has a PSD program approved as part of the applicable State Implementation Plan (SIP), while NDEP and Washoe County have PSD authority because EPA Region 9 has delegated EPA's PSD authority to them.

Recent Work in Nevada

The Prevention of Significant Deterioration (PSD) preconstruction review program uses "increment" - the maximum allowable increase in the concentration of a pollutant that is allowed to occur above a baseline concentration - to protect air quality in areas with clean air. Air districts have to

keep track of pollutant concentration levels and increments. First, the area has to be defined. Within what boundaries will levels of a particular pollutant be tracked? Will the pollutant levels be measured in several areas within the state, or throughout the entire state as one large area? Second, the baseline concentration has to be defined. Thus, normal levels of the pollutant are recorded before a certain date within a defined area. This becomes the baseline concentration, and increments are based on any increases above this value.

In Nevada, the defined areas, or "baseline areas" in which increment consumption is tracked, are defined by reference to hydrographic areas. In November 2001, Nevada requested that EPA approve a request to split Hydrographic Area 61, in the northeastern part of the state, to create two new PSD baseline areas for coarse particles particulate matter (PM_{10}), nitrogen dioxide and sulfur dioxide. Nevada made this request because NDEP believes that the subdivision of this area will promote better air quality by allowing the state to manage the two new hydrographic areas according to their distinct geographic, meteorologic, and land use characteristics.

EPA relied on the Clean Air Act provisions (in Section 107) on baseline area redesignation and EPA regulations (in 40 CFR Part 52) to evaluate Nevada's request to split Hydrographic Area 61. On Nov. 13, 2002, EPA finalized its approval after full consideration of public comments submitted on the proposal. The decision to split Hydrographic Area 61 reaffirms EPA's belief that states should have a fair degree of autonomy to balance air quality management with economic planning, and is an example of federal and state partnership in managing air quality.

CALIFORNIA

The state of California has 35 local districts which serve as air permitting authorities. These permitting authorities are responsible for issuing both preconstruction permits and federal Title V permits. The Air Permits Office provides oversight to the local districts, reviews permits proposed by the local districts, and - for some districts - issues the permits.

Farm Permits in Region 9?

In the mid-1990's, the California state Attorney General identified – as part of a required opinion for the air districts' Title V program approval – that state law does not allow any of the local air pollution control districts to issue air quality permits to certain agricultural sources, regardless of how much air pollution they may emit. At that time, EPA granted interim approval to the California Title V programs and identified this as an issue that needed to be corrected before full approval could be granted. In May 2000, EPA notified permitting authorities that all state programs must be corrected and submitted to EPA by June 2001, and be approved by EPA by December 2001.

In California, EPA worked tirelessly with the state and local agencies to meet the December 2001 approval deadline. The hard work paid off, because full approval was granted to the 34 district Title V permitting programs on time. (The 35th district, the Antelope Valley Air Quality Management District, was not included in the initial program approvals because it was a newly formed district.) EPA deferred the issue of permitting of agricultural sources for a three-year period so that agricultural air pollution could be fully studied. EPA's approval of the 34 Title V programs was challenged by a coalition of three environmental groups because they argued California's exemption of major agricultural operations from Title V permit requirements is inconsistent with the federal Clean Air Act.

In May 2002, as a result of the lawsuit, EPA and the three groups signed a settlement agreement requiring the agency to do three things: 1) issue a Notice of Deficiency (NOD) to inform the state that the exemption is a deficiency that must be corrected in 90 days or EPA will conduct rulemaking to withdraw the Title V permitting authority from the 34 districts; 2) perform rulemaking to partially withdraw the Title V permitting authority; and, 3) request applications from and issue permits to state-exempt agricultural sources according to a timeline prescribed in the settlement agreement (all permits to be issued by December 2004).

EPA has fulfilled the deficiency notice and rulemaking aspects of the settlement agreement and begun the process of requesting applications for Title V permits (see the schedule outlined in the table on pg. 8). EPA is working closely with the U.S. Department of Agriculture, the farming community and the local air districts to develop a program that identifies workable solutions and reasonable approaches to agricultural air emissions.

EPA anticipates that the vast majority of stationary agricultural sources will not require permitting because they would fall below permitting thresholds. Sources that may require permits include facilities with large stationary diesel engines and large animal feeding operations. Applicability of the Title V permit program depends on where sources are located and the air quality rating of that area. Plowing or harvesting activities will not trigger permitting requirements under the Title V program.

Timeline for Title V Agricultural Permitting in CA

Date	Item
May 14, 2002	Settlement agreement between the EPA and three environmental groups signed.
May 22, 2002	Notice of Deficiency (NOD) published in the Federal Register.
July 24, 2002	Proposed rule published in the Federal Register (67 FR 48426).
Oct. 15, 2002	Publication of final rule in Federal Register (67 FR 63551).
Nov. 14, 2002	Effective date of EPA's Title V permitting authority program (30 days after publication of final rule).
May 14, 2003	Title V applications due for those agricultural sources that are major due to diesel internal combustion (IC) engine emissions.
Aug. 1, 2003	Title V applications due for all other agricultural sources that are major sources of air pollution.
Dec. 1, 2004	Deadline for Region 9 to act on all Title V permit applications from major agricultural sources.

TRIBAL LANDS

Permitting on Tribal Lands

Who issues permits on Tribal lands? The EPA Region 9 Air Permits Office is currently responsible for issuing both federal preconstruction and Title V operating permits to major air emission sources on all tribal lands within California, Arizona, Nevada and Hawaii, as well as the entire Navajo Nation, which encompasses northeastern Arizona as well as portions of New Mexico and Utah. Ongoing work on tribal lands in Region 9 is highlighted below, including permit issuance numbers, the development of the Navajo Nation Title V program and a redesignation request by the Hualapai Nation.

Title V Permits Issued by the Region 9 Air Permits Office

For the 22 facilities on Indian land in Region 9 that are subject to Title V permitting, the Region 9 Air Permits Office has issued 15 permits so far, including 11 of 14 on the Navajo Nation. These permits contain all of the regulatory requirements that apply to each facility, including emission limits, monitoring, recordkeeping and reporting requirements.

Navajo Nation Title V Program

The Navajo Nation Environmental Protection Agency (NNEPA) is currently developing its own Title V program so that it can regulate Title V sources on its land. To achieve this goal, NNEPA requested technical assistance from Region 9 to refine the tribe's permitting regulations and assemble the necessary components for its Title V program.

Navajo and EPA staff and management pose in front of the Window Rock in Window Rock, AZ on our recent visit with the Tribe to discuss its Title V program submittal. (From left to right: Chris Lee (NNEPA), Wilson Laughter (NNEPA), Gerardo Rios (EPA R9), Emmanuelle Rapicavoli (EPA R9), Robert Trianni (NNEPA)).

In October 2002, the Permits Office responded to this request by providing the tribe with detailed written comments on its draft operating permit and acid rain rules. EPA Region 9 representatives traveled to the reservation to meet with tribal air quality staff. This was the first of what is expected to be many face-to-face meetings, as EPA and NNEPA staff work together toward the common goal of a Title V program submittal by the end of 2003.

If NNEPA submits a program and EPA Region 9 approves it, the Navajo will be the first tribe in the country to have its own Title V program.

Redesignation to Class I

Under the federal Prevention of Significant Deterioration (PSD) program, a tribe can opt to redesignate its reservation to a Class I area. Under PSD, there are three area classifications with varying degrees of air quality protection: Class I, Class II and Class III. Class I calls for the greatest degree of air quality protection. In the Clean Air Act, Congress designated certain national wilderness areas and parks as "mandatory Class I areas," meaning that they are and always will be Class I. In addition to the mandatory areas, Congress also provided that both states and tribal governing bodies have the authority to redesignate additional areas as Class I. Redesignating to Class I affords tribes greater protection of their air quality.

The PSD program is designed to protect air quality in areas that already meet national standards. One way the PSD program achieves this is via "PSD increment," which is the maximum allowable increase in concentration allowed to occur above a baseline concentration for a specific pollutant. Class I areas have the smallest increments and thus allow only a small degree of air quality deterioration. In addition, a Class I area may define Air Quality Related Values (AQRVs), which are those features or properties of a Class I area that may be adversely affected by deterioration of air quality. Some examples of AQRVs are visibility, water quality and odor. Thus a major source proposing to locate on or near a Class I area will need to ensure that its impact will not result in a violation of the Class I increments or in an adverse impact to the AQRVs established for that area.

The Hualapai Nation, a federally recognized tribe located in Northern Arizona adjacent to Grand Canyon National Park, has developed a proposal to redesignate its reservation to Class I. The tribe held a public hearing in April 2002, which was attended by EPA Region 9 staff, and is currently in the process of responding to public comments on its proposal.

Class I and Class II Increments
A Comparison (Micrograms per Cubic Meter)

Pollutant	Class I Increment	Class II Increment	NAAQS[1]
PM_{10} (annual)	4	17	50
PM_{10} (24 hr.)	8	30	150
SO_2 (annual)	2	20	80
SO_2 (24 hr.)	5	91	365
SO_2 (3 hr.)	25	512	1,300
NO_2 (annual)	2.5	25	100

[1]National Ambient Air Quality Standard

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TITLE V OPERATING PERMITS

Title V Permit Issuance Status

Hawaii's Success Story

How many Title V permits have been issued, and how many should have been issued by this time? These are questions that environmental groups began asking EPA. They were concerned because more than three years had elapsed since initial approval of various Title V permitting programs throughout the nation, yet the issuance of initial Title V permits had not been completed.

These questions led to EPA's research into the status of permit issuance, to ascertain just how many major sources require Title V permits, and of those, how many initial Title V permits had been issued. Because issuance of these permits proved to be more challenging than expected, and because of the importance of permitting major sources in a timely manner, EPA and the states have placed significant effort and emphasis on Title V permit issuance. All permitting agencies in Region 9 made a commitment to issue initial Title V permits by December 2003. Current progress in issuing permits, particularly by the state of Hawaii, is encouraging. The table below shows the status for each state in Region 9.

As of December 2002, California agencies had issued approximately 65% of their Title V permits, Nevada agencies had issued approximately 35% of their permits and Arizona agencies had issued approximately 38% of theirs. The state of Hawaii, with 125 initial sources, had issued 120 permits, with two currently undergoing EPA review, for an issuance rate approaching 98%! Well done, Hawaii!

State	Total Sources*	Total Permits Issued	% Issued
California	1,288	822	64%
Nevada	60	21	35%
Arizona	144	55	38%
Hawaii	125	120	96%
Region 9 Total	**1617**	**1018**	**63%**

* A source may be recategorized as a "synthetic minor." In general, this means that the source is not considered a "major" source anymore and, thus, does not require a Title V permit. Note that some sources may have already been converted to synthetic minors and that the numbers in the table do not reflect this.

Refer to **http://www.epa.gov/oar/oaqps/permits/maps/index.html** for a map depicting Title V permit issuance status for the entire nation.

Photo: Kim Savage

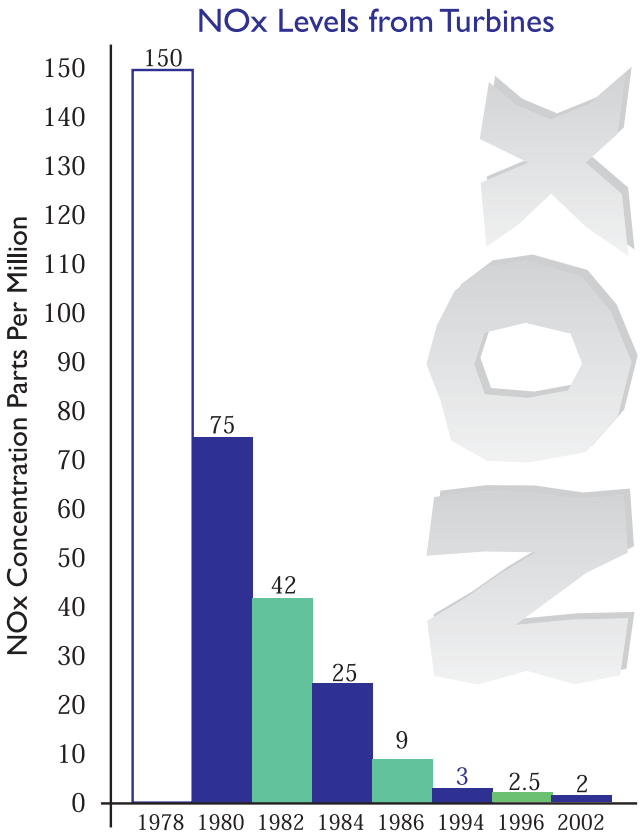
POWER PLANTS

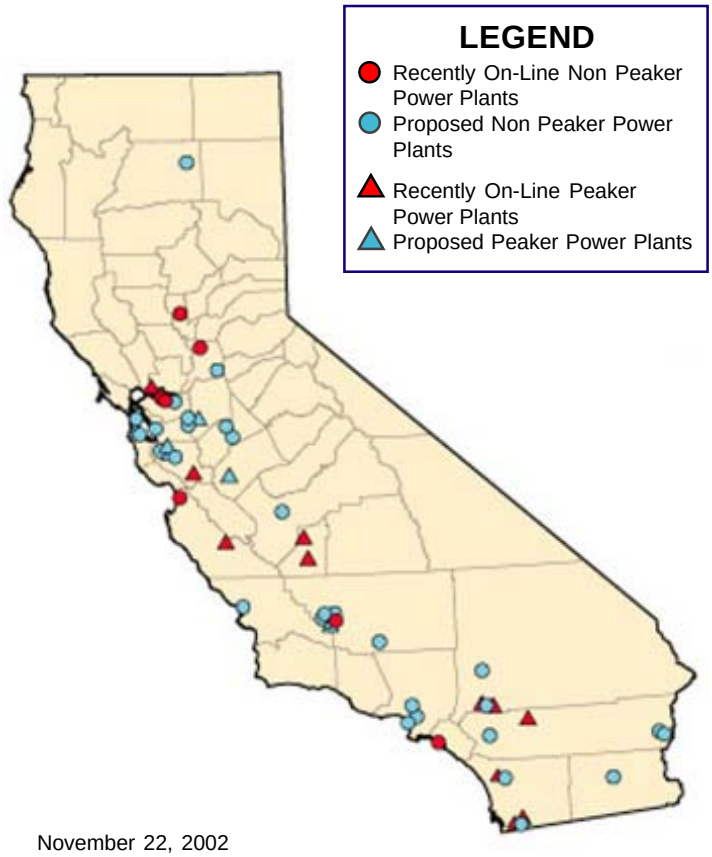
Power Plant Permitting

During the recent power crisis in California, the state and U.S. EPA implemented an emergency process to speed up construction of new power plants – particularly those that serve peak demand. EPA cooperated with its state and local partners, paying particular attention to the President's February 15, 2001 directive that instructed federal agencies to "expedite federal permit reviews and decision procedures with respect to the siting and operation of power plants in California." Though the urgency to build new power plants was high, the demand for new power had to be balanced with the objective of protecting air quality.

One way the Air Permits Office achieved this balance was to develop a more streamlined and efficient permitting process for new peaking power plants in California. In short, a simplified permit allowed power plant developers to cut through the thicket of site-specific decisions, in return for tough requirements that minimized environmental impact and maximized accountability. During 2001 alone, EPA Region 9 reviewed permits for 15 peaking projects totaling approximately 1,320 megawatts of peaking power generation. (One megawatt is enough electricity for about 200 homes on a hot day.) Since the beginning of 2001, Region 9 has issued *final* permits for five new large baseload power plants in California, totaling 2,390 megawatts of new energy supply. All together, state, local and federal agencies have licensed almost 40,000 megawatts of power in Region 9 since the beginning of 2000.

Over the years, the permit programs have been instrumental in reducing harmful emissions. For example, permits typically include requirements to install air pollution control technologies. Noticeable improvements in emission rates have been recorded. In particular, emissions of nitrogen oxides, a precursor to ozone pollution, have dropped dramatically in the past twenty years.





November 22, 2002
Map Provided by the California Energy Commission

HAZARDOUS AIR

Hazardous Air Pollutants and Air Permits

Requirements on limiting emissions of hazardous air pollutants are an important component of Title V operating permits.

Hazardous air pollutants (HAPs) are chemicals that cause serious health and environmental effects. Health effects include cancer, birth defects, nervous system problems and even death in the case of massive accidental releases. HAPs are released by sources such as refineries, chemical plants, dry cleaners, printing plants and motor vehicles.

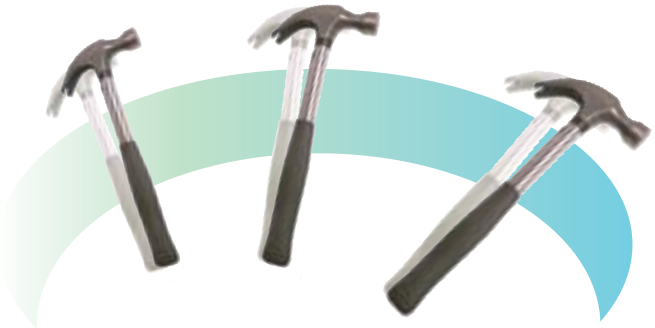
The Clean Air Act (CAA) requires EPA to regulate emissions of HAPs from industrial sources. There are both a list of regulated HAPs and a list of regulated industrial sources (referred to as "source categories"). The list of regulated HAPs, numbering 118 compounds, is included in the law. Some examples of the listed HAPs are asbestos, benzene, chlorine, fomaldehyde, methanol, phenol and trichloroethylene (TCE). EPA was required by the CAA to come up with regulations that set emissions standards and require the maximum degree of HAP reduction from source categories. These regulations are called Maximum Achievable Control Technology (or MACT) standards. Most of these regulations pertain to major sources of HAPs.

The CAA defines "major" sources of HAPs as sources that emit or have the potential to emit at least 10 tons per year of any single HAP compound listed in the CAA, or at least 25 tons per year of a mixture of several HAP compounds.

All major sources of HAPs must obtain an operating permit that includes the MACT requirements as permit conditions. All of the 43 local air permitting agencies within EPA Region 9 are authorized to issue operating permits and implement federal MACT standards. The Region 9 Air Permits Office provides oversight to the local agencies.

What is the MACT Hammer?

The CAA required EPA to pass regulations on HAPs within a period of 10 years. EPA was not able to promulgate all the MACTs within the required 10 years. Therefore, under the CAA provision called the MACT Hammer, states (and air permitting agencies in Region 9) must establish the remaining standards.



To eliminate the need for establishing case-by-case MACT Hammer standards by individual states and air permitting agencies, EPA is proposing a new timetable for submittal of required applications for case-by-case determination. EPA intends to finalize all the remaining MACT standards before the due dates proposed in this timetable.

INNOVATIVE STRATEGIES

Innovative Projects in Permitting – The Otay Mesa Power Plant Project (San Diego County) and Its Use of Mobile Emission Reduction Credits.

The Otay Mesa Power Plant is a new 510-megawatt generating facility being built in southern San Diego County by the Calpine Corporation. In 1999, when the project was being considered for development, the owner at the time, PG&E Generating Company, approached EPA, the California EPA Air Resources Board (ARB) and the San Diego Air Pollution Control District (APCD) with the idea of using emission reductions from mobile vehicles (garbage trucks, package delivery trucks and/or marine vessels) to "offset" some of the air pollution increases that the plant would cause. This was an

innovative idea because new major sources of air pollution (such as power plants) in nonattainment areas typically offset their emission increases with emission reductions from existing stationary sources. In this case, however, traditional stationary sources which could provide emission reductions were scarce in San Diego County, thereby jeopardizing the ability of PG&E to build the plant. Mobile source reductions posed new challenges to the power plant owner, the regulators and environmental organizations.

Emission offsets: To make up for an increase in emissions of a particular pollutant, emission reductions (of a somewhat greater amount) of that same pollutant elsewhere in the facility or from other sources within the district must be obtained by the source that is increasing its emissions.

This allows major sources in nonattainment areas the flexibility to meet overall pollution reduction requirements.

Working cooperatively with the San Diego County APCD, the ARB, and the project developer, all parties agreed in March 2000 on how mobile emission reduction credits (MERCs) could be created in the county and used by the power plant. This was the first time EPA had approved a mobile reduction trade for a source this large. To date, numerous diesel-powered garbage trucks owned by Waste Management of California have been replaced with new natural gas-powered trucks. Additionally, several older diesel-powered marine vessels that operate in and around the San Diego harbor have had their engines replaced with new cleaner-burning diesel engines. In total, mobile reductions comprise approximately 75 tons per year (tpy) of the 120 tpy of emissions reductions that the Otay Mesa Power plant must obtain.

For this project, EPA Region 9 found that the mobile sources considered by PG&E and San Diego were viable sources for creating emission reductions and could be used to meet the federal offset requirements. The MERCs would be actual emissions reductions, and would be quantifiable, permanent, surplus and federally enforceable.

In addition to meeting the conditions above, EPA required that the owner of the fleets maintain the fleet's typical usage level or "activity" (such as number of miles traveled). By tracking the activity (gallons of fuel consumed, miles traveled, or hours operated) of the fleet, EPA will be able to determine if a shift in demand away from the newer, "cleaner" vehicles to the dirtier vehicles occurs. This shift is important to note because, if the dirty vehicles are still being used to a large extent, the purpose of MERCs is defeated. If a significant shift occurs, the power plant would be responsible for making up the shortfall in emission offsets. Other features and benefits of the program included:

- Only NOx emission reductions were allowed.
- The vehicles or marine vessels generating the reductions had to operate in the San Diego County air basin. In other words, the vehicles or vessels had to be "captive" sources.
- By replacing older diesel garbage trucks with new, cleaner-burning, natural-gas-powered trucks, emissions of hazardous diesel exhaust particulates were reduced in the neighborhoods of San Diego County.

Emission offsets, when initially implemented, were viewed as a creative solution to meeting air pollution reduction requirements. Today, emission offsets are a standard component of air pollution reduction requirements for major sources in nonattainment areas. This project is an example of taking one further step toward creative solutions. The demand for offsets provided an incentive for facility owners and operators to think of a creative way to meet the federal, state and local requirements. It also encouraged regulatory agencies to move beyond traditional approaches of mitigating emission increases from new projects.

Clean Air Air Permitting

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